



1600

#9

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/664,958

DATE: 06/20/2002
 TIME: 17:41:29

Input Set : A:\575-60240.txt
 Output Set: N:\CRF3\06202002\I664958.raw

RECEIVED

JUL 08 2002

TECH CENTER 1600/2900

ENTERED

3 <110> APPLICANT: Trakht, Ilya
 4 Canfield, Robert
 5 Kalantarov, Gary
 6 Rudchenko, Sergei
 8 <120> TITLE OF INVENTION: Novel Tumor-Associated Marker
 10 <130> FILE REFERENCE: 0575/60240
 12 <140> CURRENT APPLICATION NUMBER: 09/664,958
 13 <141> CURRENT FILING DATE: 2000-09-18
 15 <160> NUMBER OF SEQ ID NOS: 28
 17 <170> SOFTWARE: PatentIn version 3.1
 19 <210> SEQ ID NO: 1
 20 <211> LENGTH: 333
 21 <212> TYPE: PRT
 22 <213> ORGANISM: Human
 24 <400> SEQUENCE: 1
 26 Met Pro Leu Gly Leu Gly Arg Arg Lys Lys Ala Pro Pro Leu Val Glu
 27 1 5 10 15
 30 Asn Glu Glu Ala Glu Pro Gly Arg Gly Gly Leu Gly Val Gly Glu Pro
 31 20 25 30
 34 Gly Pro Leu Gly Gly Gly Gly Ser Gly Gly Pro Gln Met Gly Leu Pro
 35 35 40 45
 38 Pro Pro Pro Pro Ala Leu Arg Pro Arg Leu Val Phe His Thr Gln Leu
 39 50 55 60
 42 Ala His Gly Ser Pro Thr Gly Arg Ile Glu Gly Phe Thr Asn Val Lys
 43 65 70 75 80
 46 Glu Leu Tyr Gly Lys Ile Ala Glu Ala Phe Arg Leu Pro Thr Ala Glu
 47 85 90 95
 50 Val Met Phe Cys Thr Leu Asn Thr His Lys Val Asp Met Asp Lys Leu
 51 100 105 110
 54 Leu Gly Gly Gln Ile Gly Leu Glu Asp Phe Ile Phe Ala His Val Lys
 55 115 120 125
 58 Gly Gln Arg Lys Glu Val Glu Val Phe Lys Ser Glu Asp Ala Leu Gly
 59 130 135 140
 62 Leu Thr Ile Thr Asp Asn Gly Ala Gly Tyr Ala Phe Ile Lys Arg Ile
 63 145 150 155 160
 66 Lys Glu Gly Ser Val Ile Asp His Ile His Leu Ile Ser Val Gly Asp
 67 165 170 175
 70 Met Ile Glu Ala Ile Asn Gly Gln Ser Leu Leu Gly Cys Arg His Tyr
 71 180 185 190
 74 Glu Val Ala Arg Leu Leu Lys Glu Leu Pro Arg Gly Arg Thr Phe Thr
 75 195 200 205
 78 Leu Lys Leu Thr Glu Pro Arg Lys Ala Phe Asp Met Ile Ser Gln Arg
 79 210 215 220

RAW SEQUENCE LISTING

DATE: 06/20/2002

PATENT APPLICATION: US/09/664,958

TIME: 17:41:29

Input Set : A:\575-60240.txt

Output Set: N:\CRF3\06202002\I664958.raw

```

82 Ser Ala Gly Gly Arg Pro Gly Ser Gly Pro Gln Leu Gly Thr Gly Arg
83 225                230                235                240
86 Gly Thr Leu Arg Leu Arg Ser Arg Gly Pro Ala Thr Val Glu Asp Leu
87                245                250                255
90 Pro Ser Ala Phe Glu Glu Lys Ala Ile Glu Lys Val Asp Asp Leu Leu
91                260                265                270
94 Glu Ser Tyr Met Gly Ile Arg Asp Thr Glu Leu Ala Ala Thr Met Val
95                275                280                285
98 Glu Leu Gly Lys Asp Lys Arg Asn Pro Asp Glu Leu Ala Glu Ala Leu
99                290                295                300
102 Asp Glu Arg Leu Gly Asp Phe Ala Phe Pro Asp Glu Phe Val Phe Asp
103 305                310                315                320
106 Val Trp Gly Ala Ile Gly Asp Ala Lys Val Gly Arg Tyr
107                325                330

```

110 <210> SEQ ID NO: 2

111 <211> LENGTH: 720

112 <212> TYPE: DNA

113 <213> ORGANISM: Human

115 <400> SEQUENCE: 2

```

116 cacggggagg cggaggcagc ggcgggcgcg gcggcgggcg cggcgggcgc ggagcagatc      60
118 ttctggtgac ccacttctc gctgctcatg ccgctgggac tggggcgccg gaaaaaggcg      120
120 cccctctag  tggaaaatga ggaggctgag ccaggccgtg gagggctggg cgtgggggag      180
122 ccagggcctt tgggcggagg tgggtcgggg ggcccccaaa tgggcttgcc cccctcccc      240
124 ccagccctgc ggccccgcct tgtgttccac acccagctgg cccatggcag tccactggc      300
126 cgcctcgagg ggttcaccaa cgtcaaggag ctgtatggca agattgccga ggcttccgc      360
128 ctgccaaact cggaggtgat gttttgcacc ctgaacaccc acaaagtgga catggacaag      420
130 ctctggtggg gccaaatcgg gctggaggac ttcatcttcg ccacgtgaa ggggcagcgc      480
132 aaggaggtgg aggtgttcaa gtcggaggat gcactcgggc tcaccatcac ggacaacggg      540
134 gctggctacg cttcatcaa ggcacatcaag gagggcagcg tgatcgacca catccacctc      600
136 atcagcgtgg gcgacatgat cgaggccatt aacgggcaga gcctgctggg ctgccggcac      660
138 tacgaagtgg cccggtgct caaggaactg ccccgaggcc gtaccttcac gctgaagctc      720

```

141 <210> SEQ ID NO: 3

142 <211> LENGTH: 9

143 <212> TYPE: PRT

144 <213> ORGANISM: Human

146 <400> SEQUENCE: 3

148 Lys Leu Leu Gly Gly Gln Ile Gly Leu

149 1 5

152 <210> SEQ ID NO: 4

153 <211> LENGTH: 10

154 <212> TYPE: PRT

155 <213> ORGANISM: HUMAN

157 <400> SEQUENCE: 4

159 Ser Leu Leu Gly Cys Arg His Tyr Glu Val

160 1 5 10

163 <210> SEQ ID NO: 5

164 <211> LENGTH: 6263

165 <212> TYPE: DNA

166 <213> ORGANISM: Human

RAW SEQUENCE LISTING

DATE: 06/20/2002

PATENT APPLICATION: US/09/664,958

TIME: 17:41:29

Input Set : A:\575-60240.txt

Output Set: N:\CRF3\06202002\I664958.raw

```

168 <400> SEQUENCE: 5
169 catcagcggg cggggggtgtc gccgaacagg ctgctccgca gagccccgcg cgacccccgcg      60
171 ccgccccgcc ccgcggcctg cctgccagag gagccgaggg ggccgcccct cgcccaacct      120
173 gcccagacatg gggaaccccc ggcccaggcg tgctggtcac catgacaaca gagacaggcc      180
175 ccgactctga ggtgaagaaa gctcaggagg agggcccgcg gcagcccgag gctgctgccg      240
177 ctgtgaccac ccctgtgacc cctgcaggcc acggccaccc agaggccaac tccaatgaga      300
179 agcatccatc ccagcaggac acgcggcctg ctgaacagag cctagacatg gaggagaagg      360
181 actacagtga ggccgatggc ctttcggaga ggaccacgcc cagcaaggcc cagaaatcgc      420
183 cccagaagat tgccaagaaa tacaagagtg ccatctgccg ggtcactctg cttgatgcct      480
185 cggagtatga gtgtgagggtg gagaacatg gccggggcca ggtgctgttt gacctggtct      540
187 gtgaacacct caacctccta gagaaggact acttcggcct gaccttctgt gatgctgaca      600
189 gccagaagaa ctggctggac ccctccaagg agatcaagaa gcagatccgg agtagccctt      660
191 ggaattttgc cttcacagtc aagttctacc cgctgatcc tgcccagctg acagaagaca      720
193 tcacaagata ctacctgtgc ctgcagctgc gggcagacat catcacgggc cggctgccat      780
195 gtccttttgt cacgcatgcc ctaactgggt cctacgctgt gcaggctgag ctgggtgact      840
197 atgatgctga ggagcatgtg ggcaactatg tcagcgagct ccgcttcgcc cctaaccaga      900
199 cccgggagct ggaggagagg atcatggagc tgcataagac atataggggg atgaccccg      960
201 gagaagcaga aatccacttc ttagagaatg ccaagaagct ttccatgtac ggagtagacc      1020
203 tgcaccatgc caaggactct gagggcatcg acatcatgtt aggcgtttgt gccaatggcc      1080
205 tctcatcta ccgggaccgg ctgagaatca accgctttgc ctggcccaag atcctcaaga      1140
207 ttctctacaa gagggagtaa ttctatatca agatccggcc tggggagtat gagcaatttg      1200
209 agagcacaat tggctttaag ctcccaaacc accggtcagc caagagactg tggaaagtct      1260
211 gcatcgagca tcatacatc ttccggtgtg tgtccctga gccccaccc aagggtcttc      1320
213 tgggtgatggg ctccaagttc cgggtacagt ggaggacca ggcacagact cgccaggcca      1380
215 gcgcccctcat tgaccggcct gcacccttct ttgagcgttc ttccagcaaa cggtagacca      1440
217 tgtcccgag ccttgatgga gcagagttct cccgcccagc ctcggtcagc gagaacctatg      1500
219 atgcagggcc tgacggtgac aagcgggatg aggatggcga gtctgggggg caacggtcag      1560
221 aggtgagga gggagaggtc aggactccaa ccaagatcaa ggagctaaag ccggagcagg      1620
223 aaaccacgcc gagacacaag caggagtctt tagacaagcc agaagatgtc ttgctgaagc      1680
225 accaggccaag catcaatgag ctcaaaagga ccctgaagga gcccaacagc aaactcatcc      1740
227 accgggatcg agactgggaa cgggagcgca ggctgccctc ctcccccgcc tccccctccc      1800
229 ccaagggcac ccctgagaaa gccaatgaga gagcagggtt gagggagggc tccgaggaga      1860
231 aagtcaaac accacgtccc cgggccccag agagtgcac aggcgatgag gaccaggacc      1920
233 aggagaggga caggtgttc ctgaaggaca accacctggc cattgagcgc aagtgtcca      1980
235 gcatcacggt cagctctacg tctagcctgg aggtgaggt ggacttcacg gtcattggtg      2040
237 actaccatgg cagcgcttc gaagacttct cccgcagcct gctgagctc gaccgggaca      2100
239 aaagcgactc ggacactgag ggcctgctgt tctccggga tctcaacaag ggggccccca      2160
241 gccaggatga tgagtctggg ggcattgagg acagcccga tcgaggggcc tgctccaccc      2220
243 cggatatgcc ccagtttgag cccgtgaaaa cagaaaccat gactgtcagc agtctggcca      2280
245 ttagaaagaa gattgagcgg gaggcgtac tgcagaccag agtctccgct atggataaca      2340
247 cccagcaggt tgatgggagt gcctcagtg ggaggaggt catagcaacc actccctcca      2400
249 tcaccacgga gaccatatc accacctgag agaacagtct caagtccggg aagggggcag      2460
251 ctgccatgat cccaggccca cagacggttg ccacggaaat ccgttctct tctccgatca      2520
253 tcgggaaaga tgcctcacc agcacctac gcgccactgc ggaaaccctc tcaacctcca      2580
255 ccaccacca tgcacaaaa actgtgaaag gagggttttc tgagacaagg atcgagaagc      2640
257 gaatcatcat tactggggat gaagatgtcg atcaagacca ggccctggct ttggccatca      2700
259 aggaggccaa actgcagcat cctgatatgc tggtaaccaa agctgtcgtg tacagagaaa      2760
261 cagacccatc cccagaggag agggacaaga agccacagga atcctgacct ctgtgaagag      2820
263 atcctggcat ttctgggtcca acccaagcca gagaaccatt aagaaggggc cttcattctg      2880

```

RAW SEQUENCE LISTING

DATE: 06/20/2002

PATENT APPLICATION: US/09/664,958

TIME: 17:41:29

Input Set : A:\575-60240.txt

Output Set: N:\CRF3\06202002\I664958.raw

265	gattctccga	cgcaacactg	acgtcccagc	tgcgacgtac	tgtcactgat	gagagactgg	2940
267	gaagggaaaa	gcataatat	atagatat	agagatat	atatatatac	aggaaacacc	3000
269	gcaccccttg	actgctgctg	gggctggcag	agcagttggc	tgacagcaac	aaccgacatc	3060
271	tgaacaccta	catttccttt	gcagacaaat	tgaagaactg	gtgggatttt	tttcaagaaa	3120
273	aaaaattata	taataactat	aatcccttgc	tcaccccttt	ccccgcgcaa	ataagaaacg	3180
275	caagccagac	cacgatgatt	gtagaagtcc	ctcccgcctt	ggttctgcac	gttacagtta	3240
277	gcagacgagc	aattccattt	gttcttctcc	agcatctcta	aggcccactt	gaatgcaaag	3300
279	gaaaacactt	gcacagcaaa	gcaagagaag	tcacagcagc	aagacacgca	cagtcaacca	3360
281	ttttccgaga	aaaaaagaaa	attccccact	tggaaagaaa	gaggaggaac	actggattct	3420
283	tactttctgg	atcttgacac	tgggtgcaa	aacctacctt	cctctctccc	gcctcccctc	3480
285	acctcaact	ctcaatgtct	tgtgtctatt	ttctgtctcg	gctccctcct	cccccttccc	3540
287	ccttccccca	ccccacaccc	ttcacctctt	gtgtcctggt	ccttctgagg	gccactgcag	3600
289	atgactctcc	tttgaaatga	gaaaaagaaa	agaaagcaag	aacagaaaac	gaagccacag	3660
291	gaagggaagt	agacattgta	tgtttatggt	ttctcattat	gaaggtgcag	cttgtaggag	3720
293	gtttgtacgg	atgtgctttg	aagttatgta	tattacatat	aacaggaaaa	aatattaata	3780
295	aacagtgtcg	gtaagtatga	agctgacatt	ctaaaattat	aattatctga	ctgtgattga	3840
297	tgtatcctga	ggttcctaga	tctcactgaa	ctggcccagc	taaggagacc	tggactctgg	3900
299	gtgtgggttg	gtcacagta	ggggtgacg	ggttcagttg	agtaatactg	tgtgtggtgt	3960
301	ttgtaattgg	ttgattgggt	gggaggggtg	gggggcccta	atggagaggt	gtgggtttgg	4020
303	caagaaagaa	gcaacacaga	tgtcgtcccc	aaaatgccag	ttcaagacac	cttctcccctg	4080
305	ccccctggt	agtaacagtc	agggcctggt	ctgtgtctcag	gtactgggtc	ccagtctggg	4140
307	actctgtctg	tgaagttgcc	acagtagagg	tccttggtct	agtccttatc	tcctacggg	4200
309	gcttgccctg	gttttcagtc	ttctctctct	ttctctcttt	tttttttttt	tgccacattc	4260
311	tgcccttccc	tgaccccat	gtaataacca	actccatctc	caaagggagg	tgggtgctctc	4320
313	agccattgta	gaagatgggt	gctttaacct	gactgtctaa	aaattcccag	ctaagccttt	4380
315	tcctctactc	tcttccttgt	tctgaatcat	ttcttcttct	caggccaaag	tagccatggt	4440
317	aaggaggctt	catggggcag	acctgaaag	atcaaaactg	catttgcaaa	gccctcccct	4500
319	gtcccaggac	aaagctgaga	ctgacgggtg	atgttgctca	taggtctccag	ctctgcataa	4560
321	gaccttggct	tggagacctc	cctctcagtc	aacagctgaa	ctctgagctt	gtgccagaa	4620
323	attaccccaa	gaccacagga	accttccaag	aagctcccat	cacaagcttg	gcattgctct	4680
325	ctgccacacg	tgggcttcc	caggcttgct	tgccacaagc	tacttctctg	agctcagaaa	4740
327	gtgccccttg	atgagggaaa	atgtcccact	gcactgcgaa	tttctcagtt	ccattttacc	4800
329	tcccagtcct	ccttctaaac	cagttaataa	attcattcca	caagtattta	ctgattacct	4860
331	gcttgtgcca	gggactattc	tcaggctgaa	gaaggtggga	ggggagggcg	gaacctgagg	4920
333	agccacctga	gccagcttta	tatttcaacc	atggctggcc	catctgagag	catctcccca	4980
335	ctctcgccaa	cctatcgggg	catagcccag	ggatgcccc	aggcggccca	ggttagatgc	5040
337	gtcccttttg	cttgtcagtg	atgacataca	ccttagctgc	ttagctggtg	ctggcctgag	5100
339	gcagggcag	aaatcagaat	agcatttgct	tctctgggca	aatgggaagt	tcagcggggc	5160
341	agcagaatca	gtggcattcc	ccctggtgca	ggccggtggg	tccactccaa	ctccccctga	5220
343	gtgtagcagc	acaatttcca	tacaccaggt	tctttctaca	atcctggtgg	aaaagccaca	5280
345	gaaccttctt	cctgcccctc	ttgagagttc	cccccttttc	tgggtcaaga	gctggagtgg	5340
347	tggctccatc	ctctctgggc	cacttcggtc	taggaactca	tctttgcagg	aaccaggagt	5400
349	cctgagcaca	ctgaacacac	ctcagaggga	ggatccttgt	tgtggatttt	gcacctggct	5460
351	ttggggcagg	ggtgaagtga	ccaggcttag	cttgtggagt	ttatgggcca	ccagggtttg	5520
353	gggaaatcac	catcccgcg	atgctgtgac	ctcccttcta	cggagatgca	ggcagtgcc	5580
355	cgagggagga	ggggacctgc	aaagctagaa	tctagggcac	tgtttcctcc	ccatccttct	5640
357	ctttgtagag	aatagagacg	tttgtcttgt	ctgtcttcaa	cctacttttc	cttttctctt	5700
359	ttttgtttct	catcctctct	gtgccacctc	tccaccag	aggccatgta	gcatagtgga	5760
361	aaaagtcct	gagggcggtt	aggagttctg	ggtgaccatc	ctggctcagc	tcctaactca	5820

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/664,958

DATE: 06/20/2002

TIME: 17:41:29

Input Set : A:\575-60240.txt

Output Set: N:\CRF3\06202002\I664958.raw

```

363 ccatgtgaca tcaggctatc cccattcccc ctcttgggcc tcagtttccc gacttgcaaa 5880
365 ataagcagaa agaaccagat gctctccagg gtctttttct actttgctat ctcatgggtc 5940
367 ttcattttct cttattttgt tttctctgga tcttttccat ctgagggtac aggaagtacc 6000
369 aggacctgtt tcagtttttg aatcctgcaa gcacattcca agactggcct gaaactgcat 6060
371 gagcaacatc actcgaaata attttttttt tcaaaagcac cttaacaacc aattgcgatg 6120
373 ctgtcctgtt cctttttact cacacccttc tctcctttct cgtcccatg ctccccacc 6180
375 tcagtgtctc gtgtgtatg cgtgtgtctc ctgttcttgt atactcaata taagtgaat 6240
377 aaatgtgttt gatgtgaac cat 6263
380 <210> SEQ ID NO: 6
381 <211> LENGTH: 933
382 <212> TYPE: PRT
383 <213> ORGANISM: Human
385 <400> SEQUENCE: 6
387 Ser Ala Gly Gly Gly Val Ala Glu Gln Ala Ala Pro Gln Ser Pro Pro
388 1 5 10 15
391 Arg Pro Arg Ala Ala Pro Pro Arg Gly Leu Pro Ala Arg Gly Ala Glu
392 20 25 30
395 Gly Ala Ala Pro Arg Pro Thr Cys Pro Thr Trp Gly Thr Pro Gly Pro
396 35 40 45
399 Gly Val Leu Val Thr Met Thr Thr Glu Thr Gly Pro Asp Ser Glu Val
400 50 55 60
403 Lys Lys Ala Gln Glu Glu Ala Pro Gln Gln Pro Glu Ala Ala Ala Ala
404 65 70 75 80
407 Val Thr Thr Pro Val Thr Pro Ala Gly His Gly His Pro Glu Ala Asn
408 85 90 95
411 Ser Asn Glu Lys His Pro Ser Gln Asp Thr Arg Pro Ala Glu Gln Ser
412 100 105 110
415 Leu Asp Met Glu Glu Lys Asp Tyr Ser Glu Ala Asp Gly Leu Ser Glu
416 115 120 125
419 Arg Thr Thr Pro Ser Lys Ala Gln Lys Ser Pro Gln Lys Ile Ala Lys
420 130 135 140
423 Lys Tyr Lys Ser Ala Ile Cys Arg Val Thr Leu Leu Asp Ala Ser Glu
424 145 150 155 160
427 Tyr Glu Cys Glu Val Glu Lys His Gly Arg Gly Gln Val Leu Phe Asp
428 165 170 175
431 Leu Val Cys Glu His Leu Asn Leu Leu Glu Lys Asp Tyr Phe Gly Leu
432 180 185 190
435 Thr Phe Cys Asp Ala Asp Ser Gln Lys Asn Trp Leu Asp Pro Ser Lys
436 195 200 205
439 Glu Ile Lys Lys Gln Ile Arg Ser Ser Pro Trp Asn Phe Ala Phe Thr
440 210 215 220
443 Val Lys Phe Tyr Pro Pro Asp Pro Ala Gln Leu Thr Glu Asp Ile Thr
444 225 230 235 240
447 Arg Tyr Tyr Leu Cys Leu Gln Leu Arg Ala Asp Ile Ile Thr Gly Arg
448 245 250 255
451 Leu Pro Cys Ser Phe Val Thr His Ala Leu Leu Gly Ser Tyr Ala Val
452 260 265 270
455 Gln Ala Glu Leu Gly Asp Tyr Asp Ala Glu Glu His Val Gly Asn Tyr
456 275 280 285

```

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/09/664,958

DATE: 06/20/2002
TIME: 17:41:30

Input Set : A:\575-60240.txt
Output Set: N:\CRF3\06202002\I664958.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:15; N Pos. 23,42,48,1105

Seq#:17; N Pos. 23,42